



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,312	01/16/2002	Shinji Nagashima	218123US3	2671
22850	7590	02/24/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LAZOR, MICHELLE A	
			ART UNIT	PAPER NUMBER

1734

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	Application No. 10/046,312	Applicant(s) NAGASHIMA, SHINJI	
	Examiner Michelle A Lazor	Art Unit 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
     4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/26/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11209876 (with English Equivalent, U.S. Patent No. 6235112).

JP 11209876 discloses a film treatment apparatus which comprises a chamber (1'); a first mass flow controller (11'') for supplying said chamber with said first gas; and a second mass flow controller (11') for supplying said chamber with said second gas (English Equivalent: Figure 3; column 5, line 13 – column 6, line 37) that is capable of gelatinizing said film of the coating solution by using said first and second gas. Thus JP 11209876 discloses all the limitations of Claim 1, and anticipates the claimed invention.

3. Claims 1, 6 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Blackwood et al. (U.S. Patent No. 4749440).

Blackwood et al. disclose a film treatment apparatus (Abstract) which comprises a chamber (10); a first mass flow controller (32) for supplying said chamber with said first gas; a second mass flow controller (33) for supplying said chamber with said second gas; and a mixer (36) for mixing said first and second gases, wherein the mixed gas from said mixer is supplied into said chamber (Figure 1; column 9, lines 30 – 64) and is capable of gelatinizing said film of the coating solution by using said first and second gas. Thus Blackwood et al. disclose all the limitations of Claims 1 and 6, and anticipate the claimed invention.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11209876 as applied in Claim 1 above, in view of Lin (U.S. Patent No. 6221160).

JP 11209876 discloses all the limitations of Claim 1 including exhaust means (23) (English Equivalent: column 4, lines 36 – 57), but does not specifically disclose a chamber pressure control mechanism for detecting a pressure in said chamber, operating said exhaust means and controlling said pressure. However, Lin discloses a chamber pressure control mechanism for detecting a pressure in a chamber, operating an exhaust means and controlling said pressure (column 7, lines 3 – 19). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a pressure control mechanism which controls pressure in a chamber via exhaust means to achieve a more accurate process control while maintaining a substantially constant humidity level in the process chamber (Abstract).

6. Claims 3 – 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11209876 as applied in Claim 1 above, in view of Lin and Gurer et al. (U.S. Patent No. 6027760).

JP 11209876 discloses all the limitations of Claim 1 including exhaust means (23) (English Equivalent: column 4, lines 36 – 57); a coating unit (7) (English Equivalent: column 4, lines 37 – 57) and said second mass flow control controls said second gas (English Equivalent:

Art Unit: 1734

column 6, lines 19- 37), but does not disclose a pressure sensor; a chamber pressure control mechanism for operating said exhaust means on the basis of a measurement signal from a pressure sensor and for controlling said pressure by controlling a throttle of an exhaust valve of said exhaust mechanism on the basis of a measurement signal from said pressure sensor; a concentration sensor; and a gas composition control mechanism for controlling said first or second mass flow controller on the basis of a measurement signal from said concentration sensor thereby keeping constant said concentration of said first gas. However, Lin discloses a pressure sensor and a chamber pressure control mechanism for detecting a pressure in a chamber, operating and controlling a throttle of an exhaust valve of said exhaust mechanism on the basis of a measurement signal from said pressure sensor (column 7, lines 3 – 19); and Gurer et al. disclose a concentration sensor; and a gas composition control mechanism for controlling said first or second mass flow controller on the basis of a measurement signal from said concentration sensor thereby keeping constant said concentration of said first gas (Abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a pressure control mechanism which controls pressure in a chamber via a throttle to achieve a more accurate process control while maintaining a substantially constant humidity level in the process chamber (Lin: Abstract); and it would have been obvious to include a concentration sensor and a gas composition control mechanism to accurately control the solvent vapor concentration into said chamber.

### ***Response to Arguments***

7. In response to applicant's argument that the Satoh reference does not disclose the gases supplied by the controllers, gelatinize the thin film formed on the substrate, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed

invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

8. In response to applicant's argument that the Blackwood reference does not disclose a film of a coating solution on the substrate being gelatinized by using first and second gas, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Although neither of the references referred to above explicitly recite gelatinizing a thin film on a substrate, both references are capable of gelatinizing a thin film on a substrate as claimed.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

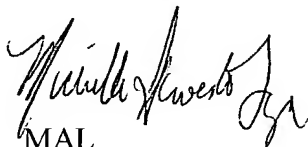
Art Unit: 1734

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle A Lazor whose telephone number is 571-272-1232. The examiner can normally be reached on Mon - Wed 6:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MAL  
2/11/04



RICHARD CRISPINO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700